Scintharista notabilis capricornica subsp. nov.

(Orth. Acrididae)

BY

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Abercorn.

Description.

♂ (Type), antennae filiform, slightly thicker in apical half; their length exceeding head and pronotum. Head globular. Fastigium of vertex elongate, narrowed to about half of its maximum width at forward end between eyes; concave, lateral margins formed by high lateral carinulae; median carinula of vertex hardly distinct. Frontal ridge widening between antennae, then narrowing slightly, then widening again; rather deeply sulcate with pronounced lateral carinulae (fig. 1). Pronotum tectiform constricted in prozona; median carina tectiform, crossed, and deeply incised by posterior sulcus; metazona slightly longer than prozona, apex of latter obtuseangular (fig. 3). Cercus straight, conical, apex bluntly rounded; supra-anal plate 3-lobed; sub-genital plate laterally compressed at apex, not upturned (fig. 2).

Macropterous, elytra blackish-brown, with small hyaline areas; discoidal area with two indistinct bands (darker zones) obscurely separated by a lighter band; post medial area mainly hyaline with irregular dark spotting (brown bordered cells) which hardly form a band; apex not darkened. Wings, basal area in both sexes bright red (matching 7.5R5/10 in Munsell Book of Color), apical area hyaline with only a few dark margined cells at tip; a broad dark brown fascia (about 15 % of wing length along anal vien) borders coloured portion of wing (photo 1). Hind tibae bright red.

Phallic complex: epiphallus bridge-like, narrow in the middle; ancorae curved, acuminate; lophi broad, truncate; lateral plates broad without marked anterior or posterior projections (fig. 6). Phallic organ

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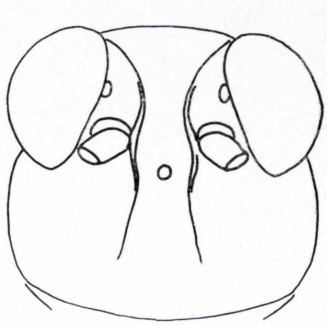
(*) International Red Locust Control Service. Abercorn, Northern Rhodesia.



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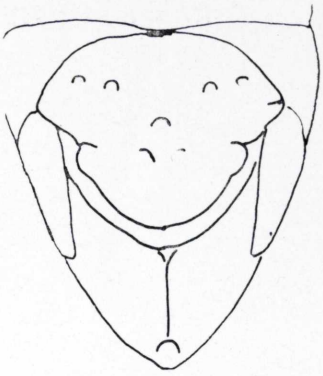

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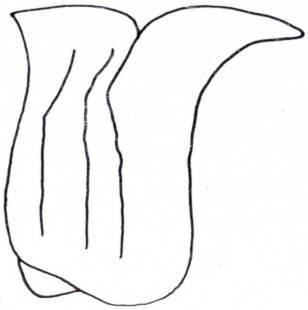

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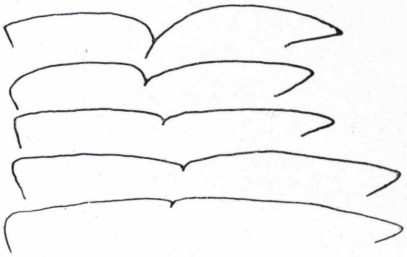

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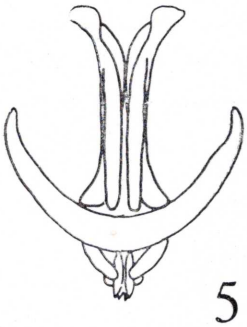

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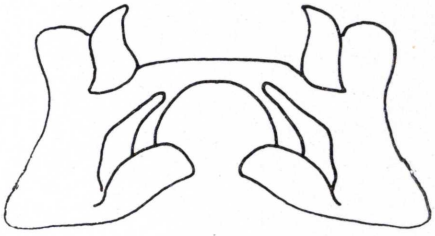

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Figs. 1-6.—1) *Scintharista notabilis capricornica* subsp. nov., front view of head; 2) Dorsal view of apex of male abdomen showing cerci; 3) Lateral view of pronotum; 4) Outlines of dorsum of pronotum of (reading from top to bottom):—*S. n. capricornica* subsp. nov., from N. Rhodesia, *S. n.* subsp. from S. Rhodesia, *S. n. notabilis* (Walker, 1870) from Eritrea, *S. n. notabilis* (Walker, 1870) from Algeria, *S. n. blanchardia* from Arabia; 5) Phallic organ of *S. n. capricornica* subsp. nov.; 6) Epiphallus of same.

with well developed apodemes, which with the zygoma form a dorsal, crescent shaped sclerite; basal valves of penis elongate and rather narrow, apical valves rather short (fig. 5).

♀, similar but larger, though relatively shorter winged. Cerci short, conical. Valves of ovipositor somewhat slender, lower pair rather weak and possessing a lateral flange.

Dimensions: ♂ (9), length 20.6 (21.5-18.4), elytra 22.7 (24.7-21.0); ♀ (7), length 30.8 (34.0-28.0), elytra 28.9 (31.7-26.5), all measurements in mm.

Distribution: Tanganyika, Ufipa 0800S: 3130E. 16 Dec. 58, 1 ♂, type; cotypes 1 ♂ and 4 ♀ ♀ collected at same time, deposited British Museum (D. Vesey-FitzGerald).

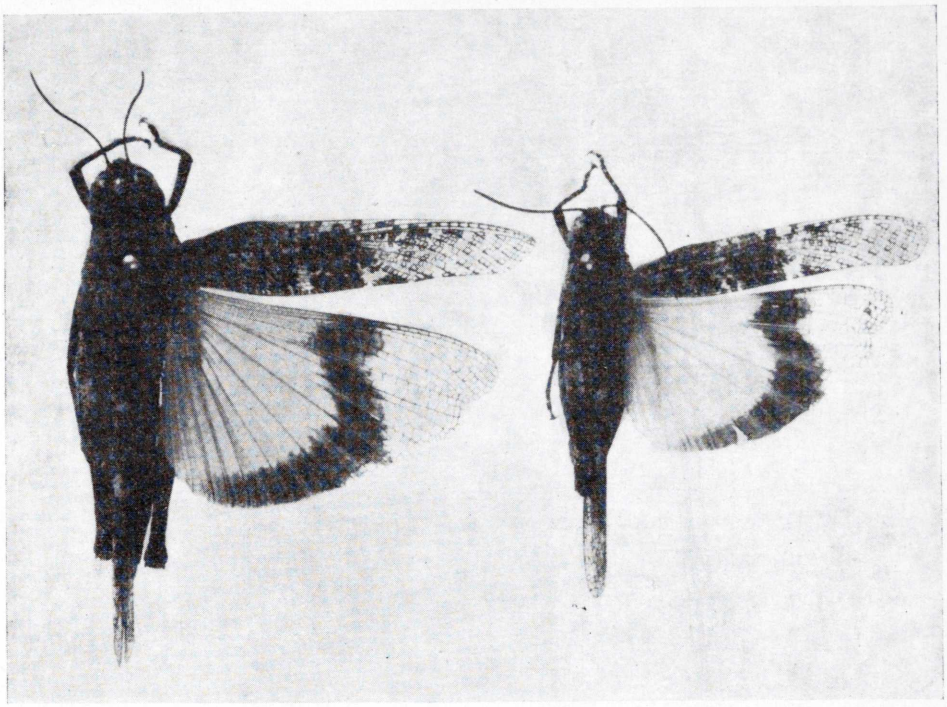
N. Rhodesia, Abercorn, 0855S: 3125E, 2 ♂ ♂, 1 Nov. 58; Kasama, 1015S: 3115E, ♂, 20 Apr. 58; Mpika, 11445S: 3130E, 3 ♂ ♂ and 2 ♀ ♀, 6 Apr. 61; Mkushi, 1425S: 2925E, 2 ♂ ♂ and 1 ♀, 2 Apr. 63, I. R. L. C. S. collection (D. Vesey-FitzGerald).

All specimens conform to the above description, except that those from Mpika are a little smaller, have slightly more numerous lighter markings on pronotum and elytra, and the red on the wings is slightly duller in tone.

The most distinctive characters of this new sub-species are, *a)* the general darker colour of the whole insect (but it must be noted that this is apparently a general toning to the grey stone background in its habitats), *b)* the bright red tibiae, and *c)* the crest-like, and deeply incised, median carina of the pronotum. The red hind wings with no trace of blue at the anal margin, and the weakly banded elytra, relate it to *notabilis* (Walker, 1870), but this has orange-yellow hind tibae; also to *lateritia* Uvarov, 1941, but this has ivory-white hind tibae; also to *cinctipes* Uvarov, 1941, but this is Indian. A very similar form has been examined from Southern Rhodesia, but this has brick-red wings, which matches more clearly the tone exhibited by *notabilis* and *lateritia;* also the carina of the pronotum is less crest-like (fig. 4).

Uvarov (1941) studied the geographical variation of *S. notabilis,* subspecies of which extend in a latitudinal belt from the Canary islands to north-western India. This is a typically saxicolous species occurring on stony ground or the gravelly slopes of eroded hills; its habitat tends to be discontinuous. The red-winged subspecies, which are without marked sexual dimorphism, are considered to belong to the most primitive types. In Arabia, a dimorphic subspecies *blanchardiana* occurs,

in which the males have red wings but the females have yellow wings. And in the north-eastern part of the range, another subspecies occurs in which both sexes have yellow wings. The most striking morphological feature characterising Central African material is the pronounced crest on the pronotum and the deep fissure where the posterior sulcus crosses it. But since this character is known to be variable in the other sub-



Fot. 1.—*Scintharista notabilis capricornica* subsp. nov., adult female (left) and male (right).

species of *notabilis* (fig. 4), it seems best to regard this character as of only subspecific importance. The new race is therefore named *capricornica,* an allusion to its range south of the equador, in the tropic of Capricorn, and also to the very markedly crested pronotum which is somewhat reminiscent of the curved horns of a wild goat, an animal which also frequents rocky hills.

In Central Africa *S. n. capricornica* subsp. nov. is restricted to rocky (granitic) outcrops, in the more elevated parts of various plant catenas, remote from the drainage lines. In such places woody vegetation is usually absent, and the scanty herbage is limited to crevices

and shelves. The adult insects spend most of their time on the bare rock surface, but take short flights when disturbed, which do not carry them away from their specialised habitat. Upon these occasions the display of the brightly coloured hind wing makes the insect conspicuous, but when it settles its general colouration makes it very difficult to see against the similarly coloured rock surface.

These grasshoppers are active in their dry hot habitat throughout the dry season. At this time all the herbage on these sites is parched and dry. Adults have been observed feeding on dry clumps of Cyperaceae at this time, and occasionally the succulent leaves of Aloes are nibbled. They have also been collected during the rainy season (November to April) and at this time a variety of annual herbs and grasses are available where pockets of shallow soil accumulates in depressions among the rocks.

Breeding is apparently continuous throughout the year. Females have been collected during October (the hottest month) with developing ovaries. Nymphs have been observed at the same time. The penultimate instar nymph is recognisably similar in colour pattern to the adult insect. The dorsal aspect is black with light ground colour markings; the upper surfaces of the hind femora are marked with three white bars which are heavily stippled with black; the hind tibia and tarsi are dark reddish brown; the wing pads are black. The flanks and underparts are whitish, but ornamented with numerous black spots which produce a dusky pattern.

References.

UVAROV, B. P.

1941. Geographical variation in *Scintharista notabilis* (Walker, 1870). *Proc. R. Ent. Soc. Lond.* (B.), 10, 91-7, 1 pl., 2 figs.